

WHAT IS CLAIMED IS:

1. Method for correction of the calibration of the register mark accurate and/or register accurate printing process of an electrophotographic printing unit, preferably of a color printing unit, comprising: identifying the influence of a toner field that is placed on a conveyor belt for print substrate sheets on the register mark, and/or registration of the printing process, and expressing such influence in the form of at least one correction value or parameter suitable for the correction of the calibration.
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2. Method according to Claim 1, wherein, in a similar manner as a correction value, at least one of the correction parameters for the influence of a certain print substrate is stored in a correction value table, which is accessible for the registration of print substrate sheets for the printing process.
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3. Method according to Claim 2, wherein, for identifying the influence of a toner field, and for determining at least one of the correction parameters for a calibration run, at least one such toner field is placed on the conveyor belt, and at least one register mark is placed on the conveyor belt in front of the toner field, and at least one register mark is placed on the conveyor belt behind the toner field, whereby each of said register mark markings is comprised of colors provided for the four-color printing process, and these register marks are recorded by measurement.
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4. Method according to Claim 3, wherein, a multitude of register marks is used for averaging by their measurement results, or the measurement results of their respective same-color markings.
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5. Method according to Claim 4, wherein, a multitude of toner fields that are positioned at a distance to each other along the transport direction are placed in a row on the conveyor belt, and that at least one register mark is placed on the conveyor belt in each of the spaces between two successive toner fields.

6. Method according to Claim 5, wherein, averaging is performed by the measurement results of register marks located in the spaces between the toner fields, or their respective same-color markings.

7. Method according to Claim 1, wherein, a gear register mark error is corrected, which is caused by the fact that a toner field is forced through the narrow gap (nip) between the electrophotographic printing unit conveyor belt and a printing organ or transfer organ, or between a transfer organ and an illustration organ, respectively, being driven by the movement, and transferring the print layout onto the substrate to be printed, the speed of which is thereby changed.

8. Method according to Claim 1, wherein, a magnification register mark error is corrected, which is caused by the fact that a toner field is forced through the narrow gap (nip) between the electrophotographic printing unit conveyor belt and a printing organ or transfer organ, or between a transfer organ and an illustration organ, respectively, being driven by the movement, and transferring the print layout onto the substrate to be printed, the shape of which is thereby changed within the printing range.

9. Method according to Claim 6, wherein, of the available multitude of toner fields, and/or the register marks placed in the spaces between the toner fields only a selected, predetermined amount is used.